

6W6-GT

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BEAM POWER AMPLIFIER

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage	6.3	ac or dc volts
Current	1.2	amp

Direct Interelectrode Capacitances (Approx.):

Grid No.1 to Plate	0.5 max.	μμf
Input	15	μμf
Output	9	μμf

Characteristics as Beam Power Amplifier:
See AMPLIFIER—Class A_1 below:

Characteristics as Triode-Connected Amplifier:
(Grid No.2 connected to plate)

Plate Voltage	225	volts
Grid-No.1 Voltage	-30	volts
Amplification Factor	6.2	
Plate Resistance	1600	ohms
Transconductance	3800	μmhos
Plate Current	22	ma
Grid-No.1 Voltage (Approx.) for plate current of 0.5 ma	-42	volts ←

Mechanical:

Mounting Position	Any
Maximum Overall Length	3-5/16"
Maximum Seated Length	2-3/4"
Maximum Diameter	1-9/32"
Bulb	T-9

Base. . . . . Intermediate-Shell Octal 6-Pin (JETEC No.B6-8) ←
or Intermediate-Shell Octal 7-Pin (JETEC No.B7-7)
or Short Intermediate-Shell Octal 6-Pin with External Barriers (JETEC No.B6-60)
or Short Intermediate-Shell Octal 7-Pin with External Barriers (JETEC No.B7-59)

Basing Designation for BOTTOM VIEW G-7AC

Pin 1 - No Connection
Pin 2 - Heater
Pin 3 - Plate
Pin 4 - Grid No.2
Pin 5 - Grid No.1
Pin 7 - Heater
Pin 8 - Cathode, Grid No.3

AMPLIFIER--Class A_1

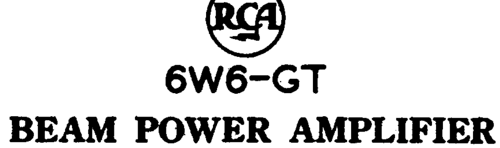
Maximum Ratings, *Design-Center Values:*

PLATE VOLTAGE	300 max.	volts
GRID-No.2 (SCREEN) VOLTAGE	150 max.	volts
PLATE DISSIPATION	10 max.	watts
GRID-No.2 INPUT	1.25 max.	watts

← Indicates a change.

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RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode .	200 max.	volts
Heater positive with respect to cathode .	200▲max.	volts

Typical Operation and Characteristics:

Plate Supply Voltage.	110	200	volts
Grid-No.2 Voltage	110	125	volts
Grid-No.1 (Control-Grid) Voltage . .	-7.5	-	volts
Cathode-Bias Resistor	-	180	ohms
Peak AF Grid-No.1 Voltage	7.5	8.5	volts
Zero-Signal Plate Current	49	46	ma
Max.-Signal Plate Current	50	47	ma
Zero-Signal Grid-No.2 Current	4	2.2	ma
Max.-Signal Grid-No.2 Current	10	8.5	ma
Plate Resistance (Approx.)	13000	28000	ohms
Transconductance	8000	8000	μmhos
Load Resistance	2000	4000	ohms
Total Harmonic Distortion (Approx.) .	10	10	%
Max.-Signal Power Output	2.1	3.8	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation	0.1 max.	megohm
For cathode-bias operation	0.5 max.	megohm

VERTICAL DEFLECTION AMPLIFIER

Triode Connected--Grid No.2 Connected to Plate

Maximum Ratings, *Design-Center Values Except As Noted:*

For operation in a 525-line, 30-frame system●

DC PLATE VOLTAGE	300 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE○	1200♦max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE	-250 max.	volts
CATHODE CURRENT:		
Peak	140 max.	ma
DC	40 max.	ma
PLATE DISSIPATION	7.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode .	200 max.	volts
Heater positive with respect to cathode .	200▲max.	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For cathode-bias operation	2.2 max.	megohms

▲ The dc component must not exceed 100 volts.

● As described in "Standards of Good Engineering Practice for Television Broadcast Stations", Federal Communications Commission.

○ The duration of the voltage pulse must not exceed 15 per cent of one scanning cycle. In a 525-line, 30-frame system, 15 per cent of one scanning cycle is 2.5 milliseconds.

♦ Under no circumstances should this absolute value be exceeded.

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AVERAGE PLATE CHARACTERISTICS
TRIODE CONNECTION

E_f=6.3 VOLTS
GRID-№2 CONNECTED TO PLATE

GRID-№1 VOLTS E_{c1}=0
-15
-30
E_{c1}=-45
-60
-75

PLATE VOLTS
0 100 200 300 400 500 600 700

PLATE MILLIAMPERES
250 200 150 100 50 0

MAR. 11, 1953

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92CM-7943



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AVERAGE PLATE CHARACTERISTICS

PENTODE CONNECTION

Ef = 6.3 VOLTS
GRID-No 2 VOLTS = 125

PLATE VOLTS

PLATE (Ib) OR GRID-No 2 (Ic2) MILLIAMPERES

MAR. 20. 1953

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